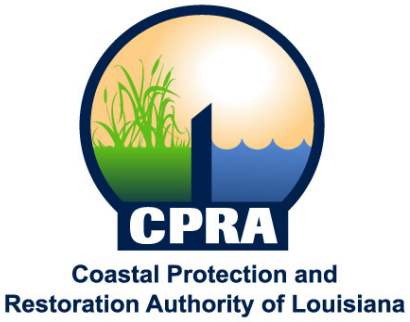

State of Louisiana
Coastal Protection and Restoration Authority
Operations Division

2014 Annual Inspection Report

for

Barataria Bay Waterway West Shoreline Protection

State Project Number BA-23
Priority Project List 4

July 7, 2014
Jefferson Parish

Prepared by:

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Appendices

I. Introduction

The Barataria Bay Waterway West Bank Protection Project (BA-23) is located in Jefferson Parish, Louisiana approximately 4.5 mi (7.2 km) south of Lafitte on the west side of the Dupre Cut portion of the Barataria Bay Waterway (BBW). The project area is east of Bayou Rigolettes, north of the Lafitte Oil and Gas Field, and southwest of The Pen (Appendix A).

II. Project Description and History

Project area wetlands were formed in a protective curve of the natural ridge of Bayou Barataria. The east-west orientation of the ridge, which serves as the southern boundary of the project area, protected the wetlands from the direct influence of salinities and tidal action of the Gulf of Mexico through Barataria Bay. Construction of the Dupre Cut portion of BBW established a direct conduit linking project wetlands with Barataria Bay. Initially, Dupre Cut spoil banks protected the project area from salinity and tidal fluctuations in the waterway. The combination of subsidence and wave erosion from marine traffic, however, has caused a breaching of the spoil banks which has resulted in increased water exchange and salinity fluctuations.

Principal project components include:

1. Foreshore Rock Dike
    - 9,900 linear feet (2,865 m) of rock shoreline protection along the west bank of the BBW.
2. Water Control Structure
    - Two (2) 48 inch diameter culverts.
    - Four (4) 5 ft-long stop log bays capable of holding 10 stop logs each.

The purpose of the foreshore rock dike is to protect the existing adjacent marsh from excessive water exchange, wave action, and subsequent erosion. The structure also protects newly created marsh which was constructed as a beneficial use project during the U.S. Army Corps of Engineers' (USACE) maintenance dredging of the BBW. This marsh was created by beneficially placing approximately 750,000 cubic yards of dredge material from the Waterway in shallow open water areas adjacent to the BBW. Gaps in the spoil bank excluded from the USACE dredging operation were filled in, thereupon reinforcing and forming a continuous structure.

The purpose of the water control structure, which is located at the end of an abandoned oil well access canal, is to allow the water levels in the new and existing marsh to be managed. The structure remains open most of the year, allowing unimpeded ingress and egress of marine organisms. During waterfowl hunting season, which is also low water season, (November through January) the structure is closed to retain water within the

southern project area. Water levels are managed to a height not to exceed 6 inches (15 cm) below marsh elevation in the southern project area.

Project construction began on June 9, 2000, and was completed on November 7, 2000. Project life is estimated to be 20 years. Annual project inspections are planned.

In December, 2005, a contract to raise these structures was awarded and resulted in the placement of 5,143 tons of rock riprap on the settled sections of the structure. The work was completed on January 24, 2006.

In May, 2007, a contract for dredging the access channel which leads to the water control structure was awarded. Approximately 4,400 cubic yards of material was dredged and placed within the channel to be used beneficially. This work was completed on June 19, 2007.

III. Inspection Purpose and Procedures

The purpose of the BA-23 annual inspection is to evaluate the constructed project features, to identify any deficiencies, and to prepare a report detailing the condition of project features and recommended corrective actions needed. Should it be determined that corrective actions are needed, the CPRA shall provide in the report a detailed cost estimate for engineering, design, supervision, inspection, and construction contingencies, and an assessment of the urgency of such repairs (O&M Plan March 18, 2002). The annual inspection report also contains a summary of maintenance projects and an estimated projected budget for the upcoming three (3) years for operation, maintenance and rehabilitation. The three (3) year projected operation and maintenance budget is shown in Appendix C. A summary of past operation and maintenance projects completed since completion of the project are outlined in Section II.

An inspection of the Barataria Bay Waterway West Shoreline Protection Project (BA-23) was held on July 2, 2014, by Barry Richard and Luke Prendergast of CPRA, along with Quin Kinler and Doug Baker of NRCS. Photographs of that inspection are included in Appendix B of this report.

IV. Inspection Results

Rock Riprap

The rock structure appeared to be in good condition at the time of the inspection (Photo #1). There are some sections which have experienced settlement, but the structure is still functioning as designed. These sections will continue to be monitored for maintenance needs.

Water Control Structure

The structure was operated according to the operations plan; stop logs had been removed from the weir and stored on the structure (Photo #2). Significant erosion was observed on the berm covering the culverts (Photo #3). This may be the result of standard tidal erosion; however, there is some evidence that this could also be coupled with burrowing wildlife (Photo #4).

V. Conclusions

The Barataria Bay Waterway West Bank Protection Project (BA-23) is performing as intended. The rock dike is protecting the existing marsh as designed, and the dredge material which the USACE placed inside of the project area has set up and vegetated nicely. The last maintenance lift raised the elevation of the settled sections of foreshore rock dike back to the original designed elevation. This should ensure that the structure performs adequately through the next programmed maintenance lift.

VI. Recommendations

It is recommended that the berm over the culverts of the Water Control Structure be repaired using fill excavated from within the project site. It is also recommended that rip-rap erosion control be considered to ensure long term success of this feature. CPRA will design the repair and continue to work with NRCS to affect these repairs.

Immediate Repairs

- Repair erosion of berm over culverts of Water Control Structure.

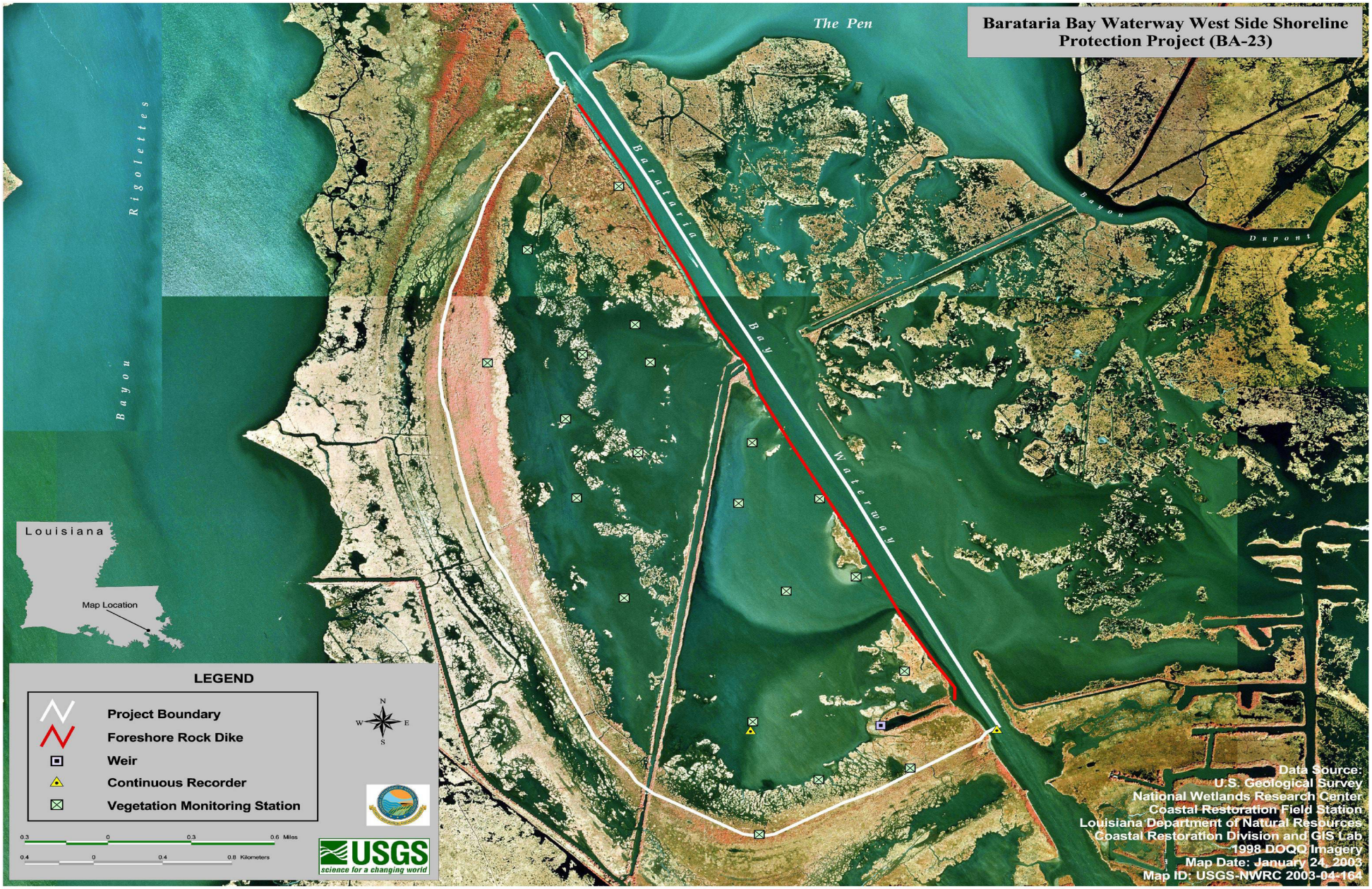
Programmed Maintenance

- Continue to check the water control structure during operational procedures.
- Continue to observe rock structure for settlement.

Appendix A

Project Features Map

Annual Inspection Report
Barataria Bay Waterway West Bank Protection
State Project No. BA-23



Appendix B

Photographs

Photo #1 – Shoreline Protection

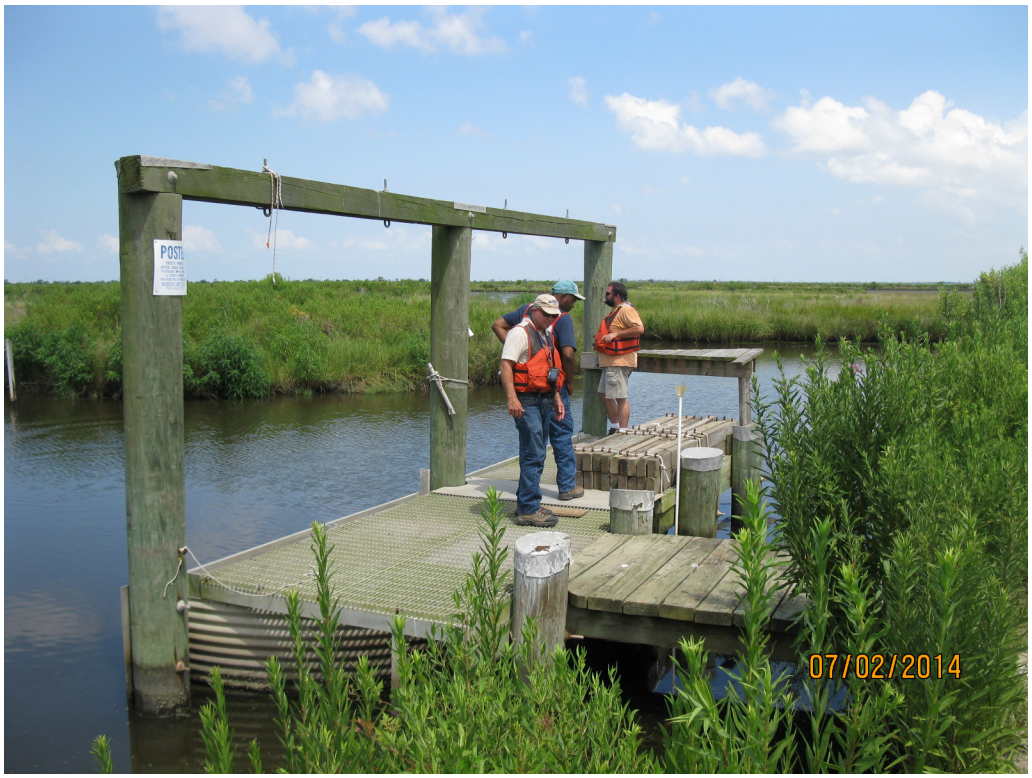


Photo #2 – Water Control Structure

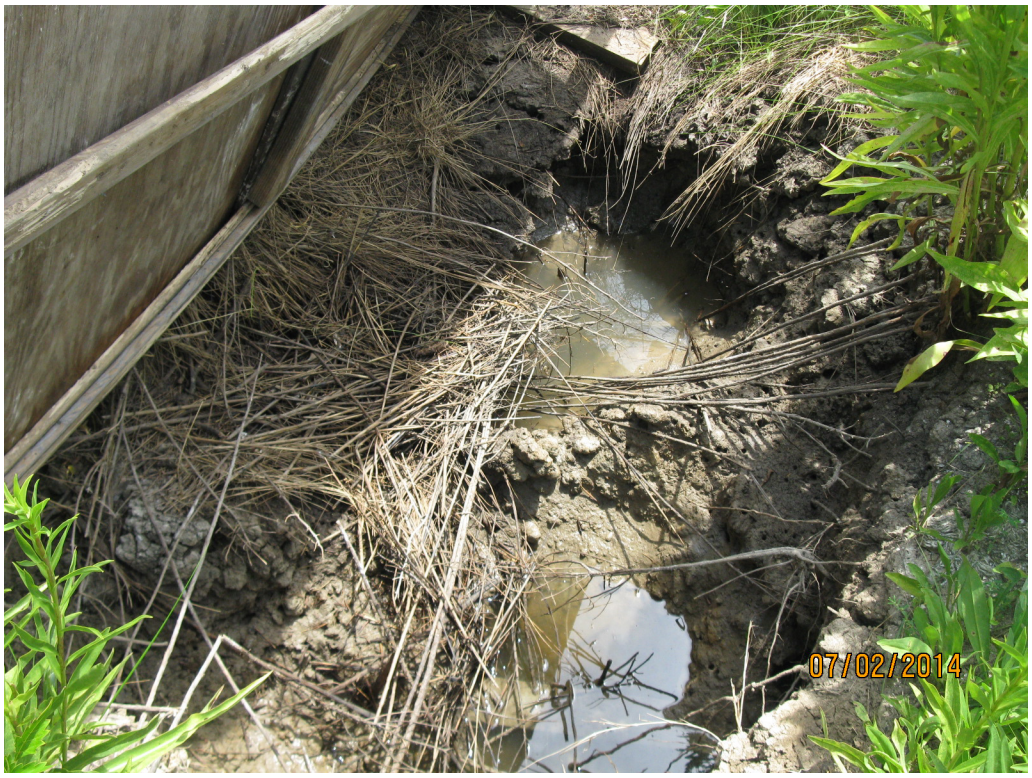


Photo #3 – WCS Berm Erosion Above Culverts

Photo #4 – Erosion/Apparent Burrowing in WCS Berm

Appendix C

Three Year Budget Projection

Annual Inspection Report
Barataria Bay Waterway West Bank Protection
State Project No. BA-23

Barataria Bay Waterway West Bank Protection (BA-23)																					
Federal Sponsor: NRCS																					
Construction Completed : 11/7/2000																					
PPL 4																					
Current Approved O&M Budget	Year 0	Year - 1	Year -2	Year -3	Year -4	Year -5	Year -6	Year -7	Year -8	Year -9	Year -10	Year -11	Year -12	Year -13	Year -14	Year -15	Year -16	Year - 17	Year -18	Year -19	Project Life	Currently
June 2009	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	Budget	Funded
State O&M																					$746,260	$746,260
Corps Admin																					$0	$0
Federal S&A																					$0	$0
Total																					$746,260	$746,260
																					Remaining	Current
Projected O&M Expenditures																					Project Life	Budget
Maintenance Inspection												$3,614	$3,708	$3,804	$3,903	$4,005	$4,109	$4,216	$4,325	$4,438	$24,996	$24,996
General Maintenance																					$0	$0
Operations												$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$12,000	$12,000
Surveys														$65,000							$0	$0
Sign Replacement																					$0	$0
Federal S&A																					$0	$0
Maintenance/Rehabilitation																					$0	$0
E&D															$12,000						$12,000	$12,000
Construction															$300,002						$300,002	$300,002
Construction Oversight															$75,001						$75,001	$75,001
Total												$5,614	$5,708	$70,804	$392,906	$6,005	$6,109	$6,216	$6,325	$6,438	$423,998	$423,998
O&M Expenditures from COE Report				$525,387	per Lana Report			Current O&M Budget less COE Admin					$746,260				Current Project Life Budget less COE Admin						$746,260
State O&M Expenditures not submitted for in-kind credit				$0				Remaining Available O&M Budget					$220,873				Total Projected Project Life Budget						$949,385
Federal Sponsor MIPRs (if applicable)				$0				**Add'l Funding amount needed thru FY15-FY17**					**$203,125**				**Project Life Budget Request Amount**						**$203,125**
Total Estimated O&M Expenditures (as of June 2014)				$525,387																		

Appendix D

Field Inspection Form

Annual Inspection Report
Barataria Bay Waterway West Bank Protection
State Project No. BA-23

MAINTENANCE INSPECTION REPORT CHECK SHEET

Project No. / Name: **BA-23 Barataria Waterway (West) Shoreline Protection**

Date of Inspection: 7/2/2014 Time: 11:00 am

Structure No. **n/a**

Inspector(s): Richard, Prendergast, Kinler, Baker

Structure Description: Rock dike and water control weir structure

Water Level Inside: N/A Outside: 0.90'

Type of Inspection: Annual

Weater Conditions: Mostly sunny, light wind

Item	Condition	Physical Damage	Corrosion	Photo #	Observations and Remarks
CMP culverts	Good	None	None		
Weir Bays - logs locks, hoist, supports	Good	None	Some	#2	Stoplogs previously removed IAW operating plan
Handrails Grating Hardware etc.	Good	None	None	#2	
Timber Piles	Good	None	None		
Timber Wales	Good	None	None		
Galv. Pile Caps	Fair	None	Some		
Signage /Supports	Good	None	None		
Riprap	Good	None	None		
Silt/Fill	Poor	None	None	#3, 4	Significant erosion noted in berm covering Water Control Structure Culverts
Foreshore Rock Dike	Good	None	None	#1	Good condition overall, minor settlement observed